

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
GROUP ART UNIT 3611**

EXAMINER: Lee, Benjamin C
APPELLANT: Tumer, Tumay O
SERIAL NO. 09/396352
FILED: September 14, 1999
FOR: Tag Having a Semiconductor Chip and Method of Attachment to Article
ART UNIT: 2612

MS Appeal Brief - Patents
Commissioner of Patents and Trademarks
Washington, D.C. 20231
Attention: Board of Patent Appeals and Interferences

REPLY BRIEF UNDER 37 CFR § 1.193

This reply brief follows the Examiner's Answer, which was mailed July 13, 2009.

RESPONSE TO EXAMINER'S ARGUMENT

I. All Of The Prior Art Fails To Teach An Integrated Circuit That Includes An Antenna

The Office repeatedly ignores the fact that the present invention teaches an integrated circuit that includes an antenna which converts a received electromagnetic wave into energy sufficient to power the integrated circuit, as recited in independent claims 27, 28, and 75. While the Office *correctly* argues that US4857893 to Carroll teaches an antenna coil that rectifies a carrier signal to provide power to the chip (See Carroll, Abstract, "This carrier signal, of [frequency] F, is rectified by a rectifying circuit in order to generate operating power"), Carroll's antenna is not included in the circuit. (See Carroll, C11/L11-18 and corresponding Figures 9A and 9B, element 20) Carroll's antenna coil is instead attached externally to the integrated circuit.

While Carroll teaches an antenna that is "realized on a single semiconductor chip," and repeatedly states that the antenna is "included on the chip," careful reading of Carroll reveals that the antenna is not included in the actual integrated circuit of the chip, but is rather etched around the integrated circuit. (See Carroll, C11/L11-18 and corresponding Figures 9A and 9B, element

20) A person of ordinary skill in the art would note that the antenna in Figures 9A and 9B is coiled around Carroll's integrated circuit. In addition, in each of the diagrams, the antenna is plainly connected to exterior pins of the integrated circuit. (See Figure 5, antenna 20 connected to pins 3 and 6, Figure 6, antenna 20 connected to pins 5 and 6, Figure 7, antenna 20 connected to pins 5 and 6, and Figure 8, antenna 20 connected to pins 3 and 6)

Likewise, all of the Office's other cited prior art teaches antennas that are separate from the integrated circuit.

II. A POSITA Would Not Have Expected An Integrated Circuit That Includes An Antenna To Produce Enough Power To Operate The Integrated Circuit

The Office argues that since Carroll teaches that an antenna wrapped around an integrated circuit provides enough power to operate the circuit, that a person of ordinary skill in the art would expect that an antenna included within an integrated circuit would provide the same amount of power. This is simply not true. Any person of ordinary skill in the art would understand that an antenna that is coiled around an integrated circuit is much longer than an antenna that is included into the integrated circuit itself. All of the prior art fails to teach that an antenna small enough to be included within an integrated circuit would provide enough power to operate the integrated circuit.

III. Carroll Fails To Teach An Integrated Circuit that Includes A Power Storage Component

The Office argues that since Carroll teaches implementing the entire transponder device in an on-chip circuit form, the battery of the transponder device must also be included in the integrated circuit itself. However, Carroll fails to teach that the battery must be included in the integrated circuit. In fact, Carroll teaches that the battery must be attached to pins 4 and 5 of the integrated circuit. (See Carroll, Figure 7, elements B1, 4, and 5)

IV. Dependent Claims Are Non-Obvious When Depending on Independent Claims

All other rejections were drawn to dependent claims 33-52, 54-74, 76-84, 87 and 90-109, which are all dependent on one of claims 27, 28 and 75. Consequently, the same deficiencies as pointed out above therefore apply. If an independent claim is non-obvious under 35 U.S.C. 103,

then any claim depending therefore is non-obvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Still further, the same arguments as presented in the appeal brief apply.

CONCLUSION OF ARGUMENT

Each of the cited prior art documents fail to teach an integrated circuit that includes an antenna that provides sufficient energy to power the integrated circuit. The rejections to the claims should thus be withdrawn.

Respectfully submitted,

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